

WHAT IS CLAIMED IS:

1 1. A method for controlling a microcomputer in microcomputer system with
2 a high speed operation mode and a low speed operation mode in which
3 operation speed of the microcomputer is slower than that of the high speed
4 operation mode, said microcomputer system including a clock operable in the
5 high and the low speed operation mode and a backup power supply for
6 supplying the clock with power for a predetermined time, said method
7 comprising steps of:

8 detecting power shutdown;
9 changing the high speed operation mode to the low speed operation
10 mode;
11 determining whether the power shutdown is recovered within a given
12 time period; and
13 setting the high speed operation mode when the power shutdown is
14 determined to be recovered.

1 2. The method for controlling a microcomputer according to claim 1,
2 wherein the clock measures the given time period in the low speed operation
3 mode.

1 3. The method for controlling a microcomputer according to claim 1, further
2 comprises a step of setting the microcomputer to a stop operation mode to stop
3 operations unless the power shutdown is recovered within the given time period.

1 4. The method for controlling a microcomputer according to claim 1,
2 wherein the microcomputer system further comprises a volatile memory for
3 storing a value representing a time period which the microcomputer measures
4 during power shutdown.

1 5. A method for controlling a microcomputer in microcomputer system with
2 a high speed operation mode and a low speed operation mode in which
3 operations of the microcomputer is slower than that of the high speed operation
4 mode, said microcomputer system including a clock operable in the high and
5 the low speed operation mode and a backup power supply for supplying the
6 clock with power for a predetermined time, said method comprising steps of:

7 detecting power shutdown;

8 changing the high speed operation mode to the low speed operation
9 mode;

10 periodically determining whether the power shutdown is recovered within
11 a first given time period;

12 setting the high speed operation mode when the power shutdown is
13 determined to be recovered; and

14 setting the microcomputer to a stop operation mode to stop operations
15 unless the power shutdown is recovered within the second given time period
16 which is longer than the first given time period.

1 6. The method for controlling a microcomputer according to claim 5, the
2 second given time period is set to be longer than the first given time period by
3 substantially an integral multiple.

1 7. The method for controlling a microcomputer according to claim 5,
2 wherein the microcomputer system further comprises a volatile memory for
3 storing a value representing a time period which the microcomputer measures
4 during power shutdown.

1 8. A method for controlling a microcomputer in microcomputer system with
2 a high speed operation mode and a low speed operation mode in which

operations of the microcomputer is slower than that of the high speed operation mode, said microcomputer system including a clock operable in the high and the low speed operation mode and a backup power supply for supplying the clock with power for a predetermined time, said method comprising steps of:

detecting power shutdown;

checking whether the clock is set;

setting the microcomputer to a stop operation mode to stop operations unless the clock is set;

changing the high speed operation mode to the low speed operation mode when the clock is set;

periodically determining whether the power shutdown is recovered within a first given time period;

setting the high speed operation mode when the power shutdown is determined to be recovered; and

setting the microcomputer to the stop operation mode unless the power shutdown is recovered within the second given time period which is longer than the first given time period.

9. The method for controlling a microcomputer according to claim 8, wherein the microcomputer system further comprises a volatile memory for storing a value representing a time period which the microcomputer measures during power shutdown.

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